SERIAL NO. 10/650,397   **PATENT**
                                                  Docket RAL919990139US2

REMARKS

This amendment is in response to the office action mailed September 29,

2004. Claims 14-23 are rejected under 35 U.S.C. 103(a) as being un-patentable

over US Patent No. 6,396,842 (Rochberger) in view of US Patent No. 6;553,002

(Bremer et al.) The Examiners argument in support of the rejection is set forth in the

office action. The arguments have been reviewed carefully but for brevity is not

repeated here.

In response, applicants respectfully disagree with the Examiner's position

and maintain that the Examiner has failed to make out a prima facie case of

obviousness. Therefore, the claims are not obvious. To make out a prima facie

case of obviousness, the examiner must show motivation for the combination. The

motivation must either be in the references themselves or the examiner must set

forth logical and concrete reasons why an artisan viewing the references, without

hindsight of applicants' disclosure, would form a combination that render the claimed

invention obvious. In addition, the examiner combination must show every element

and limitation in the claimed invention. It is applicants' position that none of these

requirements are met. Therefore, the claims are un-obvious.

No Motivation to Combine

It is applicants' contention that none of these references set forth in

motivation for combining them. The Examiner admits that Bremer et al. reference

5

does not teach a direct table that stores a first address location for a search tree.

The Examiner then relies upon Rochberger for this teaching. A review of both

references does not suggest any reason or motivation for combining these two

references. US Patent No. 6,553,002 (Bremer) teaches the use of a Patricia tree

structure (figure 7) as the structure for locating the next address of a router to which

a packet must be forwarded in order to reach a certain destination. US Patent No.

6,396,842 (Rochberger) teaches the use of a table for setting up keys that are

configured into a tree structure. Figure 10, column 14, lines 6-41. The table in

figure 10 is not part of the search structure. The search structure is 122, Figure 10,

US Patent No. 6,396,842 (Rochberger). The table is only used for setting up the

respective keys which are connected in a Patricia tree structure. No where in these

references is any suggestion that would lead an artisan to form the combination.

Without such suggestion or motivation in at least one of the references the Examiner

has failed to make out a prima facie case of obviousness. Therefore, the claims are

not obvious.

Furthermore, it should be noted that in the claimed invention the table is used

to store first address location for a search tree. Whereas in the reference the table

is used to record destination addresses. This difference suggests a teaching away

from and would be another reason why an artisan viewing the teaching of this

reference would not form the combination suggested by the Examiner.

Even though, the references do suggest a motivation for combining them the

6

SERIAL NO. 10/650,397   **PATENT**
                                              Docket RAL919990139US2

examiner can still make out a prima facie case if he sets forth logical and concrete

reasons why an artisan viewing the references would form the combination. It is

applicants' contention that the Examiner has not done so. With respect to motivation

the Examiner on page 4 of the office action states " The motivation being to have a

full match search to find the destination address with a variable length search keys

storing on the search tree with plurality of branches for search control blocks and

having the ability to handle keys being prefixes of other keys." Applicants are not

sure what the Examiner means by this statement. However, applicants contend it

does not appear to be sufficiently logical and concrete reason why an artisan

viewing the references, without hindsight from applicants disclosure, would form a

combination that would render the claims obvious. Furthermore, applicants argue

that the Examiner's statement seems inclusive of information gleaned from

applicants' disclosure and should not be the basis for forming the combination. That

which is gleaned from applicants' disclosure should not be the basis for rejecting

applicants claim.

Every Element of the Claims is not Present in the Combination

To make out a prima facie case of obviousness the combination must teach

every element or limitation of the claim. The claim, particularly the amended claim,

clearly shows the direct table is one of the plurality of data structures that is first

accessed in conducting the search. This limitation is not present in the combination

7

SERIAL NO. 10/650,397 **PATENT**
Docket RAL919990139US2

formed by the Examiner. As argued above and incorporated herein by reference the

table in Figure 10, US Patent No. 6,396,842 (Rochberger) is not an integral part of

data structure that is used in the search. It is a table that is used to set up the keys

with prefixes (see Column 14, line 5-20). The information in the table is transferred

into a Patricia tree structure 122. After that the table is not used to do the search.

Stated another way the table is not one of the elements of the search structure. The

table is setting up the keys from which the Patricia tree is derived. Its use is

analogous to a truth table that is used in logic generation. The truth table is used to

set up the logic. But once the circuit is derived from the truth table value is not

germane to operation of the logic. Applicants' claim in particularly as amended

clearly indicates that the direct table is an integral part of the data structure used in

finding a match for variable lent search key. Because the table in Rochberger is not

an integral part of the search structure as is required by the claim then when

Rochberger is combined with Bremer every limitation of the claimed invention would

not be present in the combination. Therefore, the claims are not obvious.

Furthermore, applicants contend the direct table as recited in Claim 14 is not

found in the cited references. As a consequence Claim 14 is novel. By using the

direct table the related tree structure is made shallow (i.e. requiring fewer PSCBs).

By making the tree structure with fewer nodes the search can be accomplished in a

much shorter time interval. The shorter time interval needed to complete a search is

a benefit to the user. The novel structure and benefit are indicia of un-obviousness.

8

SERIAL NO. 10/650,397

PATENT
Docket RAL919990139US2

It is believed the present amendment answers all the issues raised by the examiner. Reconsideration is hereby requested and an early allowance of all the claims is solicited.

Respectfully submitted,

Joscelyn G. Cockburn

Joscelyn G. Cockburn, Reg. No. 27,069
Attorney of Record
Phone: 919-543-9036

FAX: 919-254-2649
Customer Number 25299

9